1. **NAME**
   
   Historic: Galveston Causeway
   
   AND/OR COMMON

2. **LOCATION**
   
   **STREET & NUMBER**: Across Galveston Bay, from Virginia Point on the mainland to Galveston Island.
   
   **CITY, TOWN**: Galveston
   
   **STATE**: Texas
   
   **CITY, TOWN**: Galveston
   
   **STATE**: Texas

3. **CLASSIFICATION**

   **CATEGORY**: Site
   
   **OWNERSHIP**: Public
   
   **STATUS**: Occupied
   
   **PRESENT USE**: Other

4. **OWNER OF PROPERTY**

   **NAME**: Bridge is jointly owned by the Galveston, Houston & Henderson Railroad Co., Southern Pacific Transportation Co., and the Atchison, Topeka and Santa Fe Railway Co.
   
   **STREET & NUMBER**: Galveston
   
   **CITY, TOWN**: Galveston
   
   **STATE**: Texas

5. **LOCATION OF LEGAL DESCRIPTION**

   **COURTHOUSE, REGISTRY OF DEEDS, ETC.**: Galveston County Courthouse
   
   **STREET & NUMBER**: Galveston
   
   **CITY, TOWN**: Galveston
   
   **STATE**: Texas

6. **REPRESENTATION IN EXISTING SURVEYS**

   **TITLE**: Texas Historic Engineering Site Inventory
   
   **DATE**: 1974
   
   **DEPOSITORY FOR SURVEY RECORDS**: History of Engineering Program, C.E. Dept., Texas Tech University
   
   **CITY, TOWN**: Lubbock
   
   **STATE**: Texas
The Galveston Causeway, as originally built, consisted of earthen embankments on both Galveston Island and Virginia Point ends, 28-reinforced concrete arch spans, and a steel draw bridge. The Causeway stretches a total of 10,675 feet across the bay. Of this distance, 8,219 feet of the Causeway in reality was composed of earthen embankment, 3,356 feet of this embankment was on the Virginia Point end and 4,523 feet was on the Galveston end. The bridge, at time of completion, carried a county highway, electric interurban tracks, and steam railroad tracks.

The arch section of the Galveston Causeway originally consisted of 28-70 foot reinforced concrete arches. Out of these 28 arches, 14 were located on either side of the draw bridge. Each section of 14 arches was divided into two groups of seven each by "abutment piers" measuring 33 feet by 82 feet at the base. All of the piers rested on creosoted wooden pile foundations. The arch section was 66 feet wide and carried the highway, one interurban track, and two railroad tracks.

The Scherzer rolling lift drawbridge on the Galveston Causeway, as completed in 1912, was the largest of its kind in the world. It weighed 3,293,000 pounds, 700 tons of which was in actual steel and the remainder of which consisted of 500 cubic yards of concrete used as a counterbalance. The draw span provided a 100 foot clear opening for the passage of ships in Galveston Bay. The lift was operated by two-50 horsepower motors, furnished with electricity from the interurban line. In addition, there was a storage battery system which powered the lift motors when the electric power source from the interurban line failed. To support the immense weight of the drawbridge a very large concrete pivot-pier was constructed.

Earthen embankments on either end of the concrete arch spans, which in 1912 composed the greatest part of the structure, were in effect simple earthen berms protected by concrete slabs and retained by walls of concrete sheet piling. The reinforced concrete sheet piles for retaining the fill were 10 inches thick, 18 inches wide, and 18 to 25 feet long. The concrete piles were reinforced with steel and cast with tongue and groove designs on their sides to make a solid wall when driven into the bottom of the bay. All of the concrete sheet piles were cast at the construction camp at the island end of the bridge. The earthen fill for the embankments was moved to the side by hydraulic-fill techniques using dredges and large centrifugal pumps. The embankment sections of the original causeway were 15½ feet wide and carried the two-lane county highway, two interurban tracks, and two railroad tracks with space for the future addition of two more railroad tracks.
After the Galveston Causeway was dedicated on May 25, 1912, it served for three years until it was severely damaged and placed temporarily out of commission by the August 1915 Galveston Hurricane. This was the first severe tropical storm to hit Galveston after the devastating 1900 storm in which several thousand residents were killed. In the 1915 storm the central portions of the causeway, the concrete arch and steel draw sections, survived with only slight damage. However, the earthen embankment sections were almost entirely destroyed when the earth fill washed away in the wind and water.

In late 1917, reconstruction work began on the Galveston Causeway. In the work which followed most of the original earthen embankments were replaced with concrete arches similar to the one which had successfully withstood the storm, thus making the Galveston Causeway the continuous arched bridge which is familiar today. As completed in 1922, the reconstructed causeway contains 51 arches on the Virginia Point end and 28 arches on the Galveston Island end. The bridge remains in this basic condition and today continues to carry railway traffic from the mainland to Galveston, and vice-versa. The county highway, no longer sufficient to carry the increased automobile traffic, is currently used as a railroad service road.
Designed by the Concrete Steel Engineering Co., New York. Concrete and earth portion built by A.M. Blodgett Construction Co., Kansas City, Mo. Steel draw span built by Penn Bridge Co., Beaver Falls, Penn.

Built July 1909 to May 25, 1912.

STATEMENT OF SIGNIFICANCE

Constructed by the County of Galveston and a consortium of private railway companies in 1909-1912, the Galveston Causeway was the first successful bridge to span Galveston Bay and represents the first reliable transportation and communications link with the mainland. The 1912 Causeway has helped to integrate insular life at Galveston with that of the mainland since its construction and has provided the people of Galveston with a constant supply of fresh water via the 30-inch water main safely encased within the concrete causeway. (The 1900 hurricane had destroyed this valuable lifeline and the city was without fresh water for several days.) Thus the 1912 Causeway was a welcomed and appreciated addition to Galveston. In 1912, Galveston was one of the South's major ports and the central distributing point for an enormous district in the West and Southwest. But only one single-track trestle bridge connected the city with the mainland, thereby greatly restricting commerce. However, the new causeway, with room for six standard gauge railroad tracks, two electric interurban tracks (with room for two more), and a 40-foot wide county road served to alleviate the transportation and communications problem and gave an impetus to commerce and industry that was far-reaching in its effect. The importance of Galveston as a port and trade center was maintained. The completion of the 1912 Galveston Causeway prevented commercial repercussions which would have been felt at the national level. Likewise, the economic status of Galveston and of the State of Texas was much enhanced by the increased flow of transportation and communications which had a direct impact upon the expansion of commerce and industry. While it is true that other causeways of the type found at Galveston were erected along the Gulf Coast, none of these were so important to the welfare of the city and state which they served as was the Galveston Causeway. The Galveston Causeway was also unique in that the Scherzer rolling lift bridge built at its center to give clear passage to ships was, in 1912, the largest structure of its kind in the world. The 1912 Causeway stands as a tribute to the people of Galveston in their recovering from a seemingly hopeless situation following the hurricane of 1900.

Constructed in 1909-1912, the Galveston Causeway has since that time been in constant use except for a period between 1915 and 1922 when portions of the
Causeway, the earthen approaches, were washed out by a storm in 1915. For two years the Galveston Causeway remained inoperable. The intact concrete and draw sections mockingly stood by themselves in the center of the bay. A temporary wooden railway trestle, hastily erected, served as the only link to the mainland. Reconstruction work on the Galveston Causeway continued from late 1917 to early 1922 at which time the structure returned to normal service. Since 1922 the Causeway has served with only brief interruptions as a continuous link between the city and county of Galveston and the mainland of Texas.
MAJOR BIBLIOGRAPHICAL REFERENCES


GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY Approx. 39 acres.

UTM REFERENCES

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VERBAL BOUNDARY DESCRIPTION

The Galveston Causeway, as nominated, includes the 10,642' long concrete arch viaduct across Galveston Bay and its approaches and abutments. The Scherzer rolling lift bridge, an integral part of the Causeway, is also included. The Galveston Causeway connects Galveston Island with Virginia Point on the mainland.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

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<th>CODE</th>
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FORM PREPARED BY

Murray R. Arrowsmith, Research Associate

ORGANIZATION

History of Engineering Program

DATE

April 5, 1976

STREET & NUMBER

P.O. Box 4089

TELEPHONE

(806) 742-1313

CITY OR TOWN

Lubbock

STATE

Texas

STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE ___ LOCAL X

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

DATE

7-26-76

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DIRECTOR, OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

DATE

12/12/76

ATTEST:

DATE

16/6/76

KEEPER OF THE NATIONAL REGISTER

GPO  892-453
appears eligible, but no statement of significance & no indication on map of how much of the Causeway is being nominated.

Section B minimal - maps acreage are insufficient

Significance is a bit thin.
Bridge surface is 16 acres, so 39 may not be excessive, but a verbal boundary description and an accurate map is needed. Figures don't add up.

MAP IS IMPROPERLY MARKED, ACREAGE SEEMS EXCESSIVE, FIGURES DO NOT ADD UP.

impossible to figure accurately without properly drawn map

Paul Hutchinson
ARCHITECTURAL HISTORIAN

HAER
Inventory Review Accept

REVIEW UNIT CHIEF

BRANCH CHIEF

KEEPER

National Register Write-up Send-back Entered
Federal Register Entry Re-submit

United States Department of the Interior National Park Service WASO No. 7
Galveston Causeway
Galveston County
Galveston, Texas

History of Engineering, History of Engineering
Program, Texas Tech University January 1973

Northeast beneath northwestern most arch of
the Galveston Causeway showing Galveston
Bay in the background.

# 141

DEC 12 1976
Galveston Causeway
Galveston County
Galveston, Texas


Southeast along the former county highway portion of the Galveston Causeway from the Virginia Point (Northwest) end of the structure. The modern highway causeway is at the right side of the photograph.

# 24

DEC 12 1976
Galveston Causeway
Galveston County
Galveston, Texas
History of Engineering Program, May 1973
Full view of the Galveston Causeway south-east from Virginia Point.

# 344

DEC 12 1976
Galveston Causeway
Galveston County
Galveston, Texas
Rosenbery Library, Galveston, Texas, History of Engineering Program, Texas Tech University, 1912
Dedication of the Galveston Causeway in 1912

# 4/74

DEC 12 1976
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Also Notified

- Hon. John C. Tower
- Hon. Lloyd M. Bentsen
- Hon. Jack Brooks
- Hon. J. J. (Jake) Pickle
- Hon. W. R. Poage

State Historic Preservation Officer
- Mr. Truett Latimer

Executive Director
- Texas Historical Commission

P.O. Box 12276, Capitol Station

Austin, Texas 78711
BRYAN CARNEGIE LIBRARY
Owner:
City of Bryan
Mayor and City Officials
Bryan, Texas 77840

ADOLPHUS STERN HOUSE
Owner:
City of Nacogdoches
Mayor and City Officials
Nacogdoches, Texas 75961

TURKEY ROOST PETROGLYPHS
Owner:
Pleas Childress
P. O. Drawer K
Ozona, Texas 76943

GALVESTON CAUSEWAY
Owner:
County of Galveston
Galveston County Courthouse, 722 Moody St.
Galveston, Texas 77550
**NATIONAL REGISTER DATA SHEET**

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**CONDITION**
- original site
- unaltered
- moved
- excavated
- deteriorated
- unexposed
- unexcavated
- fair
- good
- excellent
- ruined

**AREAS OF SIGNIFICANCE**
- ARCHITECTURE-4
- ART-5
- EDUCATION-10
- INVENTION-14
- PHILOSOPHY-20
- SCIENCE-23
- SOCIAL / CULTURAL-30
- TRANSPORTATION-25
- ENGINEERING-11
- ENTERTAINMENT-20
- EXPLORATION-12
- LITERATURE-17
- MILITARY-18
- MUSIC-19
- SOCIAL / HUMANITARIAN-24
- URBAN PLANNING-31

**FEATURES**
- SUBSTANTIALLY INTACT-1
- NOT INTACT-0
- UNKNOWN-4
- NOT APPLICABLE-7

**CLAIMS**
- first SUCCESSFUL BRIDGE SPANNING GALVESTON BAY
- oldest
- only

**ACCESS**
- Yes - Unrestricted

**ADAPTIVE USE**
- Yes

**SAVED**
- Yes

**IS PROPERTY A HISTORIC DISTRICT?**
- Yes

**ARCHITECTURAL STYLE(S):**

**ARCHITECT:**

**MASTER BUILDER:**

**ENGINEER:**

**LANDSCAPE ARCHITECT / GARDEN DESIGNER:**

**INTERIOR DECORATOR:**

**ARTIST:**

**ARTISAN:**

**BUILDER / CONTRACTOR:**

**FUNCTIONS WHEN HISTORICALLY SIGNIFICANT:**
- Bridge

**DATES OF INITIAL CONSTRUCTION:**
- 1909-12

**CLAIMS:**
- First & Successful Bridge spanning Galveston Bay
- Oldest
- Only

**REINFORCED CONCRETE, STEEL ARCH SPANS WITH DRAW BRIDGE; 10,675 FEET, 66 FEET WIDE, CONCRETE PIERS ON WOODEN PILE FOUNDATIONS, EARTHEN ABUTMENTS; RECONSTRUCTED 1917 FOLLOWING DEVASTATING 1915 HURRICANE; (STILL IN USE FOR RAILROAD TRAFFIC) FIRST SUCCESSFUL BRIDGE TO SPAN GALVESTON BAY;**

**NATIONAL REGISTER WRITE-UP**

**PERSONAL EVENTS:**

**INSTITUTIONAL:**

**REVIEWERS INITIALS:**

**DATE:** 6-14-77

**IF ADDITIONAL SPACE NEEDED, NUMBER & PUT ON REVERSE.**
* (5) location - Across Galveston Bay, from Virginia Point on the mainland to Galveston Island.

* (29) engineers - designed by the Concrete Steel Engineering Co., N.Y., concrete and earth portion built by A.M. Blodgett construction Co., Kansas City, MO, steel draw span built by Penn Bridge Co., Beaver Falls, PA.